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US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

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L12

Refine Search

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DB=PGPB,USPT; PLUR=YES; OP=OR

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<u>L12</u>	L11 and l4	2	<u>L12</u>
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<u>L10</u>	L9 and yeast	3507	<u>L10</u>
<u>L9</u>	(lactate or (lactic adj acid)) with (product\$ or mak\$ or prepar\$ or ferment\$)	15167	<u>L9</u>
<u>L8</u>	lact\$ adj2 (dehydrogeanse)	2	<u>L8</u>
<u>L7</u>	pyruv\$ adj2 (decarboxylase or dehydrogeanse)	3805	<u>L7</u>
<u>L6</u>	pyuv\$ adj2 (decarboxylase or dehydrogeanse)	0	<u>L6</u>
<u>L5</u>	pyuv\$ adj2 (decarboxylase or dehydrogenase)	0	<u>L5</u>
<u>L4</u>	L3 and l2	22	<u>L4</u>
<u>L3</u>	lactic acid preparation	1130299	<u>L3</u>
<u>L2</u>	porro.in.	36	<u>L2</u>
<u>L1</u>	6429006.pn.	1	<u>L1</u>

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Search Results - Record(s) 1 through 10 of 22 returned.

☐ 1. Document ID: US 20050019879 A1

Using default format because multiple data bases are involved.

L4: Entry 1 of 22

File: PGPB

Jan 27, 2005

PGPUB-DOCUMENT-NUMBER: 20050019879

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050019879 A1

TITLE: Ascorbic acid production from yeast

PUBLICATION-DATE: January 27, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
<u>Porro</u> , Danilo	Erba		IT	
Sauer, Michael	Mader		AT	

US-CL-CURRENT: 435/126; 435/254.2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RMC	Draw Desc	Ima
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☐ 2. Document ID: US 20040157930 A1

L4: Entry 2 of 22

File: PGPB

Aug 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040157930

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040157930 A1

TITLE: Histone deacetylase enzyme-inhibiting derivatives of hydroxamic acid as new cytokine synthesis-inhibiting anti-inflammatory drugs

PUBLICATION-DATE: August 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mascagni, Paolo	Milano	CO	IT	
Leoni, Flavio	Milano	CO	IT	
<u>Porro</u> , Giulia	Milano		IT	
Pagani, Paolo	Milano		IT	
Dona, Giancarlo	Milano		IT	
Pozzi, Pietro	Milano		IT	
Dinarello, Charles	Milano		IT	
Fantuzzi, Giamila	Denver		US	
Siegmund, Britta	Milano		IT	
Reznikov, Leonid	Milano		IT	
Bufler, Philip	Milano		IT	
Kim, Soo Hyun	Aurora		US	

US-CL-CURRENT: 514/575

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 3. Document ID: US 20040146977 A1

L4: Entry 3 of 22

File: PGPB

Jul 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040146977

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040146977 A1

TITLE: Production of heterologous proteins from *Zygosaccharomyces bailii*

PUBLICATION-DATE: July 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Brambilla, Luca	Milano		IT	
Ranzi, Bianca Maria	Milano		IT	
Vai, Marina	Milano		IT	
Alberghina, Lilia	Milano		IT	
<u>Porro</u> , Danilo	Milano		IT	

US-CL-CURRENT: 435/69.1; 435/254.2, 435/483

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 4. Document ID: US 20030032152 A1

L4: Entry 4 of 22

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030032152

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030032152 A1

TITLE: Yeast strains for the production of lactic acid

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
<u>Porro</u> , Danilo	Milano		IT	
Bianchi, Michele	Milano		IT	
Ranzi, Bianca Maria	Milano		IT	
Frontali, Laura	Milano		IT	
Vai, Marina	Milano		IT	
Winkler, Aaron Adrian	Milano		IT	
Alberghina, Lilia	Milano		IT	

US-CL-CURRENT: 435/136; 435/190, 435/254.21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 5. Document ID: US 20020034520 A1

L4: Entry 5 of 22

File: PGPB

Mar 21, 2002

PGPUB-DOCUMENT-NUMBER: 20020034520
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020034520 A1

TITLE: VACCINE FOR PREVENTION OF GRAM-NEGATIVE BACTERIAL INFECTIONS AND ENDOTOXIN RELATED DISEASES

PUBLICATION-DATE: March 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
PORRO, MASSIMO	SIENA		IT	

US-CL-CURRENT: 424/234.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Ima
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☐ 6. Document ID: US 6841378 B1

L4: Entry 6 of 22

File: USPT

Jan 11, 2005

US-PAT-NO: 6841378
DOCUMENT-IDENTIFIER: US 6841378 B1

TITLE: Production of heterologous proteins from *Zygosaccharomyces bailii*

DATE-ISSUED: January 11, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brambilla; Luca	Milan			IT
Ranzi; Bianca Maria	Milan			IT
Vai; Marina	Milan			IT
Alberghina; Lilia	Milan			IT
Porro; Danilo	Milan			IT

US-CL-CURRENT: 435/254.21, 435/243, 435/25, 435/252.1, 435/320.1, 435/41, 435/471,
435/69.1, 536/23.1, 536/24.1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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☐ 7. Document ID: US 6630330 B1

L4: Entry 7 of 22

File: USPT

Oct 7, 2003

US-PAT-NO: 6630330
DOCUMENT-IDENTIFIER: US 6630330 B1

**** See image for Certificate of Correction ****

TITLE: Ascorbic acid production from yeast

DATE-ISSUED: October 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Porro</u> ; Danilo	Erba			IT
Sauer; Michael	Mader			AT

US-CL-CURRENT: 435/117; 435/126, 435/135, 435/137, 435/254.21, 549/315

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw Desc	Ima
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☐ 8. Document ID: US 6429006 B1

L4: Entry 8 of 22

File: USPT

Aug 6, 2002

US-PAT-NO: 6429006

DOCUMENT-IDENTIFIER: US 6429006 B1

TITLE: Yeast strains for the production of lactic acid transformed with a gene coding for lactic acid dehydrogenase

DATE-ISSUED: August 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Porro</u> ; Danilo	Milan			IT
Bianchi; Michele	Milan			IT
Ranzi; Bianca Maria	Milan			IT
Frontali; Laura	Milan			IT
Vai; Marina	Milan			IT
Winkler; Aaron Adrian	Milan			IT
Alberghina; Lilia	Milan			IT

US-CL-CURRENT: 435/254.2

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw Desc	Ima
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☐ 9. Document ID: US 5897548 A

L4: Entry 9 of 22

File: USPT

Apr 27, 1999

US-PAT-NO: 5897548

DOCUMENT-IDENTIFIER: US 5897548 A

**** See image for Certificate of Correction ****

TITLE: Method for reducing foam in a blood substance and antifoaming agents

DATE-ISSUED: April 27, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sacco; Silvio	Coggiola			IT
<u>Porro</u> ; Giampero	Como			IT
Rinaldi; Stefano	Parma			IT
Ciana; Leopoldo Della	Lugo			IT

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw Desc	Ima
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☐ 10. Document ID: US 5834430 A

L4: Entry 10 of 22

File: USPT

Nov 10, 1998

US-PAT-NO: 5834430
DOCUMENT-IDENTIFIER: US 5834430 A

TITLE: Potentiation of antibiotics

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Porro; Massimo	Siena			IT
Varra; Martti	Haartmaninkatu			FI

US-CL-CURRENT: 514/14; 514/11, 514/15, 514/16, 514/17, 530/317, 530/319, 530/327, 530/328, 530/329

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw Desc	Ima
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Search Results - Record(s) 1 through 10 of 36 returned.

☐ 1. Document ID: US 20050019879 A1

Using default format because multiple data bases are involved.

L2: Entry 1 of 36

File: PGPB

Jan 27, 2005

PGPUB-DOCUMENT-NUMBER: 20050019879

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050019879 A1

TITLE: Ascorbic acid production from yeast

PUBLICATION-DATE: January 27, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
<u>Porro</u> , Danilo	Erba		IT	
Sauer, Michael	Mader		AT	

US-CL-CURRENT: 435/126; 435/254.2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 2. Document ID: US 20040157930 A1

L2: Entry 2 of 36

File: PGPB

Aug 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040157930

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040157930 A1

TITLE: Histone deacetylase enzyme-inhibiting derivatives of hydroxamic acid as new cytokine synthesis-inhibiting anti-inflammatory drugs

PUBLICATION-DATE: August 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mascagni, Paolo	Milano	CO	IT	
Leoni, Flavio	Milano	CO	IT	
<u>Porro</u> , Giulia	Milano		IT	
Pagani, Paolo	Milano		IT	
Dona, Giancarlo	Milano		IT	
Pozzi, Pietro	Milano		IT	
Dinarelli, Charles	Milano		IT	
Fantuzzi, Giamila	Denver		US	
Siegmund, Britta	Milano		IT	
Reznikov, Leonid	Milano		IT	
Bufler, Philip	Milano		IT	
Kim, Soo Hyun	Aurora		US	

US-CL-CURRENT: 514/575

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Ima
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☐ 3. Document ID: US 20040146977 A1

L2: Entry 3 of 36

File: PGPB

Jul 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040146977

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040146977 A1

TITLE: Production of heterologous proteins from *Zygosaccharomyces bailii*

PUBLICATION-DATE: July 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Brambilla, Luca	Milano		IT	
Ranzi, Bianca Maria	Milano		IT	
Vai, Marina	Milano		IT	
Alberghina, Lilia	Milano		IT	
<u>Porro</u> , Danilo	Milano		IT	

US-CL-CURRENT: 435/69.1; 435/254.2, 435/483

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Ima
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☐ 4. Document ID: US 20030032152 A1

L2: Entry 4 of 36

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030032152

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030032152 A1

TITLE: Yeast strains for the production of lactic acid

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
<u>Porro</u> , Danilo	Milano		IT	
Bianchi, Michele	Milano		IT	
Ranzi, Bianca Maria	Milano		IT	
Frontali, Laura	Milano		IT	
Vai, Marina	Milano		IT	
Winkler, Aaron Adrian	Milano		IT	
Alberghina, Lilia	Milano		IT	

US-CL-CURRENT: 435/136; 435/190, 435/254.21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Ima
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☐ 5. Document ID: US 20020034520 A1

L2: Entry 5 of 36

File: PGPB

Mar 21, 2002

PGPUB-DOCUMENT-NUMBER: 20020034520

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020034520 A1

TITLE: VACCINE FOR PREVENTION OF GRAM-NEGATIVE BACTERIAL INFECTIONS AND ENDOTOXIN RELATED DISEASES

PUBLICATION-DATE: March 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
PORRO, MASSIMO	SIENA		IT	

US-CL-CURRENT: 424/234.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Ima
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☐ 6. Document ID: US 6841378 B1

L2: Entry 6 of 36

File: USPT

Jan 11, 2005

US-PAT-NO: 6841378

DOCUMENT-IDENTIFIER: US 6841378 B1

TITLE: Production of heterologous proteins from *Zygosaccharomyces bailii*

DATE-ISSUED: January 11, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brambilla; Luca	Milan			IT
Ranzi; Bianca Maria	Milan			IT
Vai; Marina	Milan			IT
Alberghina; Lilia	Milan			IT
Porro; Danilo	Milan			IT

US-CL-CURRENT: 435/254.21, 435/243, 435/25, 435/252.1, 435/320.1, 435/41, 435/471, 435/69.1, 536/23.1, 536/24.1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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☐ 7. Document ID: US 6630330 B1

L2: Entry 7 of 36

File: USPT

Oct 7, 2003

US-PAT-NO: 6630330

DOCUMENT-IDENTIFIER: US 6630330 B1

**** See image for Certificate of Correction ****

TITLE: Ascorbic acid production from yeast

DATE-ISSUED: October 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Porro</u> ; Danilo	Erba			IT
Sauer; Michael	Mader			AT

US-CL-CURRENT: 435/117; 435/126, 435/135, 435/137, 435/254.21, 549/315

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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☐ 8. Document ID: US 6429006 B1

L2: Entry 8 of 36

File: USPT

Aug 6, 2002

US-PAT-NO: 6429006

DOCUMENT-IDENTIFIER: US 6429006 B1

TITLE: Yeast strains for the production of lactic acid transformed with a gene coding for lactic acid dehydrogenase

DATE-ISSUED: August 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Porro</u> ; Danilo	Milan			IT
Bianchi; Michele	Milan			IT
Ranzi; Bianca Maria	Milan			IT
Frontali; Laura	Milan			IT
Vai; Marina	Milan			IT
Winkler; Aaron Adrian	Milan			IT
Alberghina; Lilia	Milan			IT

US-CL-CURRENT: 435/254.2

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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☐ 9. Document ID: US 5897548 A

L2: Entry 9 of 36

File: USPT

Apr 27, 1999

US-PAT-NO: 5897548

DOCUMENT-IDENTIFIER: US 5897548 A

**** See image for Certificate of Correction ****

TITLE: Method for reducing foam in a blood substance and antifoaming agents

DATE-ISSUED: April 27, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sacco; Silvio	Coggiola			IT
<u>Porro</u> ; Giampero	Como			IT
Rinaldi; Stefano	Parma			IT
Ciana; Leopoldo Della	Lugo			IT

US-CL-CURRENT: 604/405; 516/133, 604/403

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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☐ 10. Document ID: US 5834430 A

L2: Entry 10 of 36

File: USPT

Nov 10, 1998

US-PAT-NO: 5834430

DOCUMENT-IDENTIFIER: US 5834430 A

TITLE: Potentiation of antibiotics

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Porro</u> ; Massimo	Siena			IT
Varra; Martti	Haartmaninkatu			FI

US-CL-CURRENT: 514/14; 514/11, 514/15, 514/16, 514/17, 530/317, 530/319, 530/327,
530/328, 530/329

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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Search Results - Record(s) 1 through 10 of 83 returned.

☐ 1. Document ID: US 20050181492 A1

Using default format because multiple data bases are involved.

L11: Entry 1 of 83

File: PGPB

Aug 18, 2005

PGPUB-DOCUMENT-NUMBER: 20050181492

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050181492 A1

TITLE: Ethanol production

PUBLICATION-DATE: August 18, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Javed, Muhammad	Dagenham		GB	
Cusdin, Fiona	Horley		GB	
Milner, Paul	Ickenham		GB	
Green, Edward	Guildford		GB	

US-CL-CURRENT: [435/161](#); [435/252.31](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw Desc	Ima
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☐ 2. Document ID: US 20050158836 A1

L11: Entry 2 of 83

File: PGPB

Jul 21, 2005

PGPUB-DOCUMENT-NUMBER: 20050158836

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050158836 A1

TITLE: Ethanol production in gram-positive microbes

PUBLICATION-DATE: July 21, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ingram, Lonnie O'Neal	Gainesville	FL	US	
Barbosa-Alleyne, Maria D. F.	Gainesville	FL	US	

US-CL-CURRENT: [435/161](#); [435/252.31](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw Desc	Ima
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☐ 3. Document ID: US 20050147994 A1

L11: Entry 3 of 83

File: PGPB

Jul 7, 2005

PGPUB-DOCUMENT-NUMBER: 20050147994
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050147994 A1

TITLE: Method for immobilizing a biologic in a polyurethane-hydrogel composition, a composition prepared from the method, and biomedical applicaions

PUBLICATION-DATE: July 7, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sandford, Andrew F.	Marlborough	MA	US	
Subramanian, Venkiteswaran	San Diego	CA	US	
Allen, Jeffrey R.	Poway	CA	US	
Swanson, Paul E.	San Diego	CA	US	
Storer, Joey W.	Midland	MI	US	
Sharma, Deepak K.	Midland	MI	US	

US-CL-CURRENT: 435/6; 435/7.1, 525/54.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Ima
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☐ 4. Document ID: US 20050147609 A1

L11: Entry 4 of 83

File: PGPB

Jul 7, 2005

PGPUB-DOCUMENT-NUMBER: 20050147609
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050147609 A1

TITLE: Use of anti-IL-17 antibody for the treatment of cartilage damaged by osteoarthritis

PUBLICATION-DATE: July 7, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Filvaroff, Ellen H.	San Francisco	CA	US	

US-CL-CURRENT: 424/145.1; 606/1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Ima
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☐ 5. Document ID: US 20050136525 A1

L11: Entry 5 of 83

File: PGPB

Jun 23, 2005

PGPUB-DOCUMENT-NUMBER: 20050136525
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050136525 A1

TITLE: Expression of granular starch hydrolyzing enzymes in Trichoderma and process for producing glucose from granular starch substrates

PUBLICATION-DATE: June 23, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Baldwin, Toby M.	Palo Alto	CA	US	
Bower, Benjamin S.	Newark	CA	US	
Chotani, Gopal K.	Cupertino	CA	US	
Dunn-Coleman, Nigel	Los Gatos	CA	US	
Lantero, Oreste J. JR.	Belvidere	IL	US	
Lantz, Suzanne E.	San Carlos	CA	US	
Pepsin, Michael J.	Castro Valley	CA	US	
Shetty, Jayarama K.	Pleasanton	CA	US	
Strohm, Bruce A.	Beloit	WI	US	

US-CL-CURRENT: 435/204; 435/254.3, 435/484

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 6. Document ID: US 20050120394 A1

L11: Entry 6 of 83

File: PGPB

Jun 2, 2005

PGPUB-DOCUMENT-NUMBER: 20050120394

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050120394 A1

TITLE: System for achieving high expression of genes

PUBLICATION-DATE: June 2, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Saitoh, Satoshi	Aichi		JP	
Saotome, Osamu	Nissin-shi, Aichi		JP	
Yasutani, Noriko	Aichi		JP	
Matsuo, Yasuo	Okazaki-shi, Aichi		JP	
Ishida, Nobuhiro	Aichi-gun, Aichi		JP	
Hirai, Masana	Seto-shi, Aichi		JP	
Kitamoto, Katsuhiko	Ushiku-shi, Ibaraki		JP	

US-CL-CURRENT: 800/8; 435/191, 435/252.3, 435/254.21, 435/320.1, 435/69.1, 536/23.2, 800/288

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 7. Document ID: US 20050112737 A1

L11: Entry 7 of 83

File: PGPB

May 26, 2005

PGPUB-DOCUMENT-NUMBER: 20050112737

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050112737 A1

TITLE: Lactic acid producing yeast

PUBLICATION-DATE: May 26, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Liu, Chi Li	Decatur	IL	US	
Lievense, Jefferson C.	Forsyth	IL	US	

US-CL-CURRENT: 435/139; 435/254.2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 8. Document ID: US 20050100996 A1

L11: Entry 8 of 83

File: PGPB

May 12, 2005

PGPUB-DOCUMENT-NUMBER: 20050100996
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20050100996 A1

TITLE: Methods for producing ethanol from carbon substrates

PUBLICATION-DATE: May 12, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lantero, Oreste J. JR.	Belvidere	IL	US	
Shetty, Jayarama K.	Pleasanton	CA	US	

US-CL-CURRENT: 435/161; 435/189, 435/254.21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 9. Document ID: US 20050074442 A1

L11: Entry 9 of 83

File: PGPB

Apr 7, 2005

PGPUB-DOCUMENT-NUMBER: 20050074442
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20050074442 A1

TITLE: Compositions and methods for augmenting kidney function

PUBLICATION-DATE: April 7, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ranganathan, Natarajan	Broomall	PA	US	

US-CL-CURRENT: 424/93.45

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Ima
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☐ 10. Document ID: US 20050059136 A1

L11: Entry 10 of 83

File: PGPB

Mar 17, 2005

PGPUB-DOCUMENT-NUMBER: 20050059136
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20050059136 A1

TITLE: Pyruvate producing yeast strain

PUBLICATION-DATE: March 17, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
van Maris, Antonius Jeroen Adriaan	Decatur	IL	US	
Pronk, Jacobus Thomas	Schipluiden		NL	
van Dijken, Johannes Pieter	Leidschendam		NL	

US-CL-CURRENT: 435/254.21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Ima
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Terms	Documents
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Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 5196315 A

Using default format because multiple data bases are involved.

L8: Entry 1 of 2

File: USPT

Mar 23, 1993

US-PAT-NO: 5196315

DOCUMENT-IDENTIFIER: US 5196315 A

TITLE: Human neuronal cell line

DATE-ISSUED: March 23, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ronnett; Gabriele V.	Baltimore	MD		
Nye; Jeffrey S.	New York	NY		
Hester; Lynda D.	Towson	MD		
Snyder; Solomon H.	Baltimore	MD		

US-CL-CURRENT: [435/29](#); [435/368](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw Desc	Ima
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☐ 2. Document ID: US 4442204 A

L8: Entry 2 of 2

File: USPT

Apr 10, 1984

US-PAT-NO: 4442204

DOCUMENT-IDENTIFIER: US 4442204 A

TITLE: Homogeneous specific binding assay device and preformed complex method

DATE-ISSUED: April 10, 1984

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Greenquist; Alfred C.	Elkhart	IN		
Walter; Bert	South Bend	IN		

US-CL-CURRENT: [435/7.4](#); [422/56](#), [422/57](#), [435/7.7](#), [435/7.71](#), [435/7.72](#), [435/7.9](#), [435/805](#), [435/971](#), [436/518](#), [436/530](#), [436/537](#), [436/810](#), [436/815](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw Desc	Ima
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=> s lactate or lactic
 L1 306608 LACTATE OR LACTIC

=> s l1 and dehydrogenase
 L2 111292 L1 AND DEHYDROGENASE

=> s l2 and yeast
 L3 1847 L2 AND YEAST

=> s pyruvate or pyruvic
 L4 115611 PYRUVATE OR PYRUVIC

=> s l4 and l3

L5 538 L4 AND L3

=> s l5 and (fermentation or preparation or production)

L6 377 L5 AND (FERMENTATION OR PREPARATION OR PRODUCTION)

=> e porro/au

E1 14 PORRMANN V/AU
E2 1 PORRMANN VOLKER/AU
E3 5 --> PORRO/AU
E4 88 PORRO A/AU
E5 1 PORRO A D/AU
E6 15 PORRO A M/AU
E7 1 PORRO A R/AU
E8 2 PORRO ABDO Y/AU
E9 2 PORRO ADRIANA M/AU
E10 1 PORRO ADRIANA MARIA/AU
E11 1 PORRO ALESSANDRO/AU
E12 1 PORRO ANNA/AU

=> d his

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L1 306608 S LACTATE OR LACTIC
L2 111292 S L1 AND DEHYDROGENASE
L3 1847 S L2 AND YEAST
L4 115611 S PYRUVATE OR PYRUVIC
L5 538 S L4 AND L3
L6 377 S L5 AND (FERMENTATION OR PREPARATION OR PRODUCTION)
E PORRO/AU

=> s l4 and decarboxylase

L7 0 L4 AND DECARBOXYLASE

=> d l6 ti abs ibib 1-10

L6 ANSWER 1 OF 377 MEDLINE on STN

TI Efficient **production** of L-**Lactic** acid by metabolically
engineered *Saccharomyces cerevisiae* with a genome-integrated L-
lactate dehydrogenase gene.

AB We developed a metabolically engineered **yeast** which produces
lactic acid efficiently. In this recombinant strain, the coding
region for **pyruvate** decarboxylase 1 (PDC1) on chromosome XII is
substituted for that of the l-**lactate dehydrogenase**
gene (LDH) through homologous recombination. The expression of mRNA for
the genome-integrated LDH is regulated under the control of the native
PDC1 promoter, while PDC1 is completely disrupted. Using this method, we
constructed a diploid **yeast** transformant, with each haploid
genome having a single insertion of bovine LDH. **Yeast** cells
expressing LDH were observed to convert glucose to both **lactate**
(55.6 g/liter) and ethanol (16.9 g/liter), with up to 62.2% of the glucose
being transformed into **lactic** acid under neutralizing
conditions. This transgenic strain, which expresses bovine LDH under the
control of the PDC1 promoter, also showed high **lactic** acid
production (50.2 g/liter) under nonneutralizing conditions. The
differences in **lactic** acid **production** were compared
among four different recombinants expressing a heterologous LDH gene
(i.e., either the bovine LDH gene or the *Bifidobacterium longum* LDH gene):
two transgenic strains with 2microm plasmid-based vectors and two

genome-integrated strains.

ACCESSION NUMBER: 2005178428 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15812027
TITLE: Efficient **production** of L-Lactic acid
by metabolically engineered *Saccharomyces cerevisiae* with a
genome-integrated L-lactate **dehydrogenase**
gene.
AUTHOR: Ishida Nobuhiro; Saitoh Satoshi; Tokuhiko Kenro; Nagamori
Eiji; Matsuyama Takashi; Kitamoto Katsuhiko; Takahashi
Haruo
CORPORATE SOURCE: Biotechnology Laboratory, Toyota Central R&D Labs Inc.,
Nagakute-cho, Aichi 480-1192, Japan..
ell68@mosk.tytlabs.co.jp
SOURCE: Applied and environmental microbiology, (2005 Apr) 71 (4)
1964-70.
Journal code: 7605801. ISSN: 0099-2240.
PUB. COUNTRY: United States
DOCUMENT TYPE: (EVALUATION STUDIES)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200507
ENTRY DATE: Entered STN: 20050407
Last Updated on STN: 20050707
Entered Medline: 20050706

L6 ANSWER 2 OF 377 MEDLINE on STN

TI Homofermentative **lactate production** cannot sustain
anaerobic growth of engineered *Saccharomyces cerevisiae*: possible
consequence of energy-dependent **lactate** export.
AB Due to a growing market for the biodegradable and renewable polymer
polylactic acid, the world demand for **lactic acid** is rapidly
increasing. The tolerance of yeasts to low pH can benefit the process
economy of **lactic acid production** by minimizing the
need for neutralizing agents. *Saccharomyces cerevisiae* (CEN.PK
background) was engineered to a homofermentative **lactate**
-producing **yeast** via deletion of the three genes encoding
pyruvate decarboxylase and the introduction of a heterologous
lactate dehydrogenase (EC 1.1.1.27). Like all
pyruvate decarboxylase-negative *S. cerevisiae* strains, the
engineered strain required small amounts of acetate for the synthesis of
cytosolic acetyl-coenzyme A. Exposure of aerobic glucose-limited
chemostat cultures to excess glucose resulted in the immediate appearance
of **lactate** as the major **fermentation** product. Ethanol
formation was absent. However, the engineered strain could not grow
anaerobically, and **lactate production** was strongly
stimulated by oxygen. In addition, under all conditions examined,
lactate production by the engineered strain was slower
than alcoholic **fermentation** by the wild type. Despite the
equivalence of alcoholic **fermentation** and **lactate**
fermentation with respect to redox balance and ATP generation,
studies on oxygen-limited chemostat cultures showed that **lactate**
production does not contribute to the ATP economy of the
engineered **yeast**. This absence of net ATP **production**
is probably due to a metabolic energy requirement (directly or indirectly
in the form of ATP) for **lactate** export.

ACCESSION NUMBER: 2004229566 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15128549
TITLE: Homofermentative **lactate production**
cannot sustain anaerobic growth of engineered *Saccharomyces*
cerevisiae: possible consequence of energy-dependent
lactate export.
AUTHOR: van Maris Antonius J A; Winkler Aaron A; Porro Danilo; van

CORPORATE SOURCE: Dijken Johannes P; Pronk Jack T
Department of Biotechnology, Delft University of
Technology, NL-2628 BC Delft, The Netherlands.
SOURCE: Applied and environmental microbiology, (2004 May) 70 (5)
2898-905.
Journal code: 7605801. ISSN: 0099-2240.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200407
ENTRY DATE: Entered STN: 20040510
Last Updated on STN: 20040728
Entered Medline: 20040727

L6 ANSWER 3 OF 377 MEDLINE on STN

TI **Lactic acid production** by *Saccharomyces cerevisiae*
expressing a *Rhizopus oryzae* **lactate dehydrogenase**
gene.

AB This work demonstrates the first example of a fungal **lactate dehydrogenase** (LDH) expressed in **yeast**. A L(+)-LDH gene, *ldhA*, from the filamentous fungus *Rhizopus oryzae* was modified to be expressed under control of the *Saccharomyces cerevisiae* *adh1* promoter and terminator and then placed in a 2 micro -containing **yeast** -replicating plasmid. The resulting construct, *pLdhA68X*, was transformed and tested by **fermentation** analyses in haploid and diploid **yeast** containing similar genetic backgrounds. Both recombinant strains utilized 92 g glucose/l in approximately 30 h. The diploid isolate accumulated approximately 40% more **lactic acid** with a final concentration of 38 g **lactic acid**/l and a yield of 0.44 g **lactic acid**/g glucose. The optimal pH for **lactic acid production** by the diploid strain was pH 5. LDH activity in this strain remained relatively constant at 1.5 units/mg protein throughout the **fermentation**. The majority of carbon was still diverted to the ethanol **fermentation** pathway, as indicated by ethanol yields between 0.25-0.33 g/g glucose. *S. cerevisiae* mutants impaired in ethanol **production** were transformed with *pLdhA68X* in an attempt to increase the **lactic acid** yield by minimizing the conversion of **pyruvate** to ethanol. Mutants with diminished **pyruvate** decarboxylase activity and mutants with disrupted alcohol **dehydrogenase** activity did result in transformants with diminished ethanol **production**. However, the efficiency of **lactic acid production** also decreased.

ACCESSION NUMBER: 2003036725 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12545382

TITLE: **Lactic acid production** by *Saccharomyces cerevisiae* expressing a *Rhizopus oryzae* **lactate dehydrogenase** gene.

AUTHOR: Skory Christopher D

CORPORATE SOURCE: Fermentation Biotechnology Research Unit, National Center for Agricultural Utilization Research, USDA Agricultural Research Service, 1815 N. University Street, Peoria IL 61604, USA.. skorycd@ncaur.usda.gov

SOURCE: Journal of industrial microbiology & biotechnology, (2003 Jan) 30 (1) 22-7. Electronic Publication: 2003-01-03.
Journal code: 9705544. ISSN: 1367-5435.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200307

ENTRY DATE: Entered STN: 20030125

Last Updated on STN: 20030723

L6 ANSWER 4 OF 377 MEDLINE on STN

TI **Pyruvate** decarboxylase: a key enzyme for the oxidative metabolism of **lactic acid** by *Acetobacter pasteurianus*.

AB *Acetobacter pasteurianus*, an obligately oxidative bacterium, is the first organism shown to utilize **pyruvate** decarboxylase (PDC) as a central enzyme for oxidative metabolism. In plants, **yeast**, and other bacteria, PDC functions solely as part of the fermentative ethanol pathway. During the growth of *A. pasteurianus* on **lactic acid**, the central intermediate **pyruvate** is cleaved to acetaldehyde and CO(2) by PDC. Acetaldehyde is subsequently oxidized to its final product, acetic acid. The presence of the PDC enzyme in *A. pasteurianus* was confirmed by zymograms stained for acetaldehyde **production**, enzyme assays using alcohol **dehydrogenase** as the coupling enzyme, and by cloning and characterization of the *pdc* operon. *A. pasteurianus pdc* was also expressed in recombinant *Escherichia coli*. The level of PDC activity was regulated in response to growth substrate, highest with **lactic acid** and absent with mannitol. The translated PDC sequence (548 amino acids) was most similar to that of *Zymomonas mobilis*, an obligately fermentative bacterium. A second operon (*aldA*) was also found which is transcribed divergently from *pdc*. This operon encodes a putative aldehyde **dehydrogenase** (ALD2; 357 amino acids) related to class III alcohol dehydrogenases and most similar to glutathione-dependent formaldehyde dehydrogenases from alpha-Proteobacteria and *Anabaena azollae*.

ACCESSION NUMBER: 2001688037 MEDLINE

DOCUMENT NUMBER: PubMed ID: 11734888

TITLE: **Pyruvate** decarboxylase: a key enzyme for the oxidative metabolism of **lactic acid** by *Acetobacter pasteurianus*.

AUTHOR: Chandra Raj K; Ingram L O; Maupin-Furlow J A

CORPORATE SOURCE: Department of Microbiology and Cell Science, University of Florida, Gainesville, Florida 32611-0700, USA.

SOURCE: Archives of microbiology, (2001 Dec) 176 (6) 443-51.
Electronic Publication: 2001-09-25.
Journal code: 0410427. ISSN: 0302-8933.

PUB. COUNTRY: Germany: Germany, Federal Republic of

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

OTHER SOURCE: GENBANK-AF368435

ENTRY MONTH: 200202

ENTRY DATE: Entered STN: 20011206

Last Updated on STN: 20030105

Entered Medline: 20020207

L6 ANSWER 5 OF 377 MEDLINE on STN

TI Efficient homolactic **fermentation** by *Kluyveromyces lactis* strains defective in **pyruvate** utilization and transformed with the heterologous LDH gene.

AB A high yield of **lactic acid** per gram of glucose consumed and the absence of additional metabolites in the **fermentation** broth are two important goals of **lactic acid production** by microorganisms. Both purposes have been previously approached by using a *Kluyveromyces lactis yeast* strain lacking the single **pyruvate** decarboxylase gene (*KLPDC1*) and transformed with the heterologous **lactate dehydrogenase** gene (*LDH*). The *LDH* gene was placed under the control the *KLPDC1* promoter, which has allowed very high levels of **lactate dehydrogenase** (*LDH*) activity, due to the absence of autoregulation by *KLPdc1p*. The maximal yield obtained was 0.58 g g⁻¹, suggesting that a large fraction of the glucose consumed was not converted into **pyruvate**. In a

different attempt to redirect **pyruvate** flux toward homolactic **fermentation**, we used *K. lactis* LDH transformant strains deleted of the **pyruvate dehydrogenase** (PDH) E1 α subunit gene. A great process improvement was obtained by the use of producing strains lacking both PDH and **pyruvate** decarboxylase activities, which showed yield levels of as high as 0.85 g g⁻¹ (maximum theoretical yield, 1 g g⁻¹), and with high LDH activity.

ACCESSION NUMBER: 2001676740 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11722915
TITLE: Efficient homolactic **fermentation** by *Kluyveromyces lactis* strains defective in **pyruvate** utilization and transformed with the heterologous LDH gene.
AUTHOR: Bianchi M M; Brambilla L; Protani F; Liu C L; Lievens J; Porro D
CORPORATE SOURCE: Department of Cell and Developmental Biology, University of Rome La Sapienza, Rome 00185, Italy..
Michele.Bianchi@uniroma1.it
SOURCE: Applied and environmental microbiology, (2001 Dec) 67 (12) 5621-5.
Journal code: 7605801. ISSN: 0099-2240.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200203
ENTRY DATE: Entered STN: 20011128
Last Updated on STN: 20020305
Entered Medline: 20020304

L6 ANSWER 6 OF 377 MEDLINE on STN
TI Replacement of a metabolic pathway for large-scale **production** of **lactic acid** from engineered yeasts.
AB Interest in the **production** of L-(+)-**lactic acid** is presently growing in relation to its applications in the synthesis of biodegradable polymer materials. With the aim of obtaining efficient **production** and high productivity, we introduced the bovine L-lactate dehydrogenase gene (LDH) into a wild-type *Kluyveromyces lactis* **yeast** strain. The observed **lactic acid production** was not satisfactory due to the continued coproduction of ethanol. A further restructuring of the cellular metabolism was obtained by introducing the LDH gene into a *K. lactis* strain in which the unique **pyruvate** decarboxylase gene had been deleted. With this modified strain, in which **lactic fermentation** substituted completely for the pathway leading to the **production** of ethanol, we obtained concentrations, productivities, and yields of **lactic acid** as high as 109 g liter⁻¹, 0.91 g liter⁻¹ h⁻¹, and 1.19 mol per mole of glucose consumed, respectively. The organic acid was also produced at pH levels lower than those usual for bacterial processes.

ACCESSION NUMBER: 1999402770 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10473436
TITLE: Replacement of a metabolic pathway for large-scale **production** of **lactic acid** from engineered yeasts.
AUTHOR: Porro D; Bianchi M M; Brambilla L; Menghini R; Bolzani D; Carrera V; Lievens J; Liu C L; Ranzi B M; Frontali L; Alberghina L
CORPORATE SOURCE: Dipartimento di Biotecnologie e Bioscienze, Universita degli Studi Milano-Bicocca, 20126 Milan, Italy..
DANILO.PORRO@UNIMIB.IT
SOURCE: Applied and environmental microbiology, (1999 Sep) 65 (9) 4211-5.
Journal code: 7605801. ISSN: 0099-2240.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199912
ENTRY DATE: Entered STN: 20000113
Last Updated on STN: 20000113
Entered Medline: 19991223

L6 ANSWER 7 OF 377 MEDLINE on STN

TI Carbon and electron flow in *Clostridium cellulolyticum* grown in chemostat culture on synthetic medium.

AB Previous results indicated poor sugar consumption and early inhibition of metabolism and growth when *Clostridium cellulolyticum* was cultured on medium containing cellobiose and **yeast** extract. Changing from complex medium to a synthetic medium had a strong effect on (i) the specific cellobiose consumption, which was increased threefold; and (ii) the electron flow, since the NADH/NAD⁺ ratios ranged from 0.29 to 2.08 on synthetic medium whereas ratios as high as 42 to 57 on complex medium were observed. These data indicate a better control of the carbon flow on mineral salts medium than on complex medium. By continuous culture, it was shown that the electron flow from glycolysis was balanced by the **production** of hydrogen gas, ethanol, and **lactate**. At low levels of carbon flow, **pyruvate** was preferentially cleaved to acetate and ethanol, enabling the bacteria to maximize ATP formation. A high catabolic rate led to **pyruvate** overflow and to increased ethanol and **lactate production**. In vitro, glyceraldehyde-3-phosphate **dehydrogenase**, **lactate dehydrogenase**, and ethanol **dehydrogenase** levels were higher under conditions giving higher in vivo specific **production** rates. Redox balance is essentially maintained by NADH-ferredoxin reductase-hydrogenase at low levels of carbon flow and by ethanol **dehydrogenase** and **lactate dehydrogenase** at high levels of carbon flow. The same maximum growth rate (0.150 h⁻¹) was found in both mineral salts and complex media, proving that the uptake of nutrients or the generation of biosynthetic precursors occurred faster than their utilization. On synthetic medium, cellobiose carbon was converted into cell mass and catabolized to produce ATP, while on complex medium, it served mainly as an energy supply and, if present in excess, led to an accumulation of intracellular metabolites as demonstrated for NADH. Cells grown on synthetic medium and at high levels of carbon flow were able to induce regulatory responses such as the **production** of ethanol and **lactate dehydrogenase**.

ACCESSION NUMBER: 1999255554 MEDLINE

DOCUMENT NUMBER: PubMed ID: 10322031

TITLE: Carbon and electron flow in *Clostridium cellulolyticum* grown in chemostat culture on synthetic medium.

AUTHOR: Guedon E; Payot S; Desvaux M; Petitdemange H

CORPORATE SOURCE: Laboratoire de Biochimie des Bactéries Gram +, Domaine Scientifique Victor Grignard, Université Henri Poincaré, Faculté des Sciences, 54506 Vandœuvre-lès-Nancy Cedex, France.

SOURCE: Journal of bacteriology, (1999 May) 181 (10) 3262-9.

Journal code: 2985120R. ISSN: 0021-9193.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199906

ENTRY DATE: Entered STN: 19990628

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Entered Medline: 19990617

L6 ANSWER 8 OF 377 MEDLINE on STN

TI *Sporomusa silvacetica* sp. nov., an acetogenic bacterium isolated from aggregated forest soil.

AB *Sporomusa silvacetica* sp. nov. DG-1T (= DSMZ 10669T) (T = type strain) was isolated from well-drained, aggregated forest soil (pH 6.0) in east-central Germany. The cells were obligately anaerobic, slightly curved rods and were motile by means of laterally inserted flagella on the concave side of each cell. Typical cells were approximately 3.5 by 0.7 micron. Cells stained weakly gram positive, but thin sections revealed a complex multilayer cell wall. Spores were spherical and distended the sporangia. Growth and substrate utilization occurred with ferulate, vanillate, fructose, betaine, fumarate, 2,3-butanediol, **pyruvate**, **lactate**, glycerol, ethanol, methanol, formate, and H₂-CO₂. With most substrates, acetate was the primary reduced end product and was produced in stoichiometries indicative of an acetyl-coenzyme A pathway-dependent metabolism. Fumarate was dismutated to succinate and acetate. Methoxyl and acrylate groups of various aromatic compounds were O-demethylated and reduced, respectively. **Yeast** extract was not required for growth. Cells grew optimally at approximately 30 degrees C and pH 6.8; under these conditions and with fructose as the substrate, the doubling time was approximately 14 h. The lowest temperature that supported growth was between 5 and 10 degrees C. The carbon monoxide **dehydrogenase** and hydrogenase activities were approximately 9 and 102 mumol min⁻¹ mg of protein⁻¹, respectively. A type b cytochrome was detected in the membrane. The G + C content was approximately 43 mol%. Phylogenetic analysis of the 16S ribosomal DNA indicated that DG-1T was most closely related to members of the genus *Sporomusa* in the *Clostridium* subphylum of the gram-positive bacteria.

ACCESSION NUMBER: 97256917 MEDLINE

DOCUMENT NUMBER: PubMed ID: 9103621

TITLE: *Sporomusa silvacetica* sp. nov., an acetogenic bacterium isolated from aggregated forest soil.

AUTHOR: Kuhner C H; Frank C; Griesshammer A; Schmittroth M; Acker G; Gossner A; Drake H L

CORPORATE SOURCE: Lehrstuhl für Ökologische Mikrobiologie, BITOK, Bayreuth, Germany.

SOURCE: International journal of systematic bacteriology, (1997 Apr) 47 (2) 352-8.

Journal code: 0042143. ISSN: 0020-7713.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

OTHER SOURCE: GENBANK-Y09976

ENTRY MONTH: 199706

ENTRY DATE: Entered STN: 19970612

Last Updated on STN: 19970612

Entered Medline: 19970603

L6 ANSWER 9 OF 377 MEDLINE on STN

TI Metabolic fuel utilization and **pyruvate** oxidation during the postnatal period.

AB The transplacental supply of nutrients is interrupted at birth, which diverts maternal metabolism to lactation. After birth, energy homeostasis is rapidly regained through milk nutrients which supply the newborn with the fatty acids and ketone bodies required for neonatal development. However, immediately after birth and before the onset of suckling there is a time lapse in which the newborn undergoes a unique kind of starvation. During this period glucose is scarce and ketone bodies are not available owing to the delay in ketogenesis. Under these circumstances, the newborn is supplied with another metabolic fuel, **lactate**, which is utilized as a source of energy and carbon skeletons. Neonatal rat lung, heart, liver and brain utilize **lactate** for energy

production and lipogenesis. **Lactate** is also utilized by the brain of human babies with type I glycogenosis. Both rat neurons and astrocytes in primary culture actively use **lactate** as an oxidizable substrate and as a precursor of phospholipids and sterols. **Lactate** oxidation is enhanced by dichloroacetate, an inhibitor of the **pyruvate dehydrogenase** kinase in neurons but not in astrocytes, suggesting that the **pyruvate dehydrogenase** is regulated differently in each type of cell. Despite the low activity of this enzyme in newborn brain, **pyruvate** decarboxylation is the main fate of glucose in both neurons and astrocytes. The occurrence of a **yeast-like pyruvate** decarboxylase activity in neonatal brain may explain these results.

ACCESSION NUMBER: 97038986 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 8884567
 TITLE: Metabolic fuel utilization and **pyruvate** oxidation during the postnatal period.
 AUTHOR: Medina J M; Tabernero A; Tovar J A; Martin-Barrientos J
 CORPORATE SOURCE: Departamento de Bioquimica Biologia Molecular, Facultad de Farmacia, Universidad de Salamanca, Spain.
 SOURCE: Journal of inherited metabolic disease, (1996) 19 (4) 432-42. Ref: 33
 Journal code: 7910918. ISSN: 0141-8955.
 PUB. COUNTRY: Netherlands
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199701
 ENTRY DATE: Entered STN: 19970219
 Last Updated on STN: 19970219
 Entered Medline: 19970130

L6 ANSWER 10 OF 377 MEDLINE on STN

TI Transient responses of *Candida utilis* to oxygen limitation: regulation of the Kluver effect for maltose.

AB The facultatively fermentative **yeast** *Candida utilis* exhibits the Kluver effect for maltose: this disaccharide is respired and assimilated but, in contrast to glucose, it cannot be fermented. To study the mechanism of the Kluver effect, metabolic responses of *C. utilis* to a transition from aerobic, sugar-limited growth to oxygen-limited conditions were studied in chemostat cultures. Unexpectedly, the initial response of maltose-grown cultures to oxygen limitation was very similar to that of glucose-grown cultures. In both cases, alcoholic **fermentation** occurred after a lag phase of 1 h, during which glycerol, **pyruvate** and D-**lactate** were the main **fermentation** products. After ca. 10 h the behaviour of the maltose- and glucose-grown cultures diverged: ethanol disappeared from the maltose-grown cultures, whereas **fermentation** continued in steady-state, oxygen-limited cultures grown on glucose. The disappearance of alcoholic **fermentation** in oxygen-limited chemostat cultures growing on maltose was not due to a repression of the synthesis of **pyruvate** decarboxylase and alcohol **dehydrogenase**. The results demonstrate that the Kluver effect for maltose in *C. utilis* does not reflect an intrinsic inability of this **yeast** to ferment maltose, but is caused by a regulatory phenomenon that affects a key enzyme in maltose metabolism, probably the maltose carrier. The observed kinetics indicate that this regulation occurs at the level of enzyme synthesis rather than via modification of existing enzyme activity.

ACCESSION NUMBER: 95304845 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 7785332
 TITLE: Transient responses of *Candida utilis* to oxygen limitation: regulation of the Kluver effect for maltose.

AUTHOR: Kaliterna J; Weusthuis R A; Castrillo J I; Van Dijken J P;
Pronk J T
CORPORATE SOURCE: Department of Microbiology and Enzymology, Kluyer
Laboratory of Biotechnology, Delft University of
Technology, The Netherlands.
SOURCE: Yeast (Chichester, England), (1995 Apr 15) 11 (4) 317-25.
Journal code: 8607637. ISSN: 0749-503X.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199507
ENTRY DATE: Entered STN: 19950726
Last Updated on STN: 19980206
Entered Medline: 19950714